MARKED COPY OF AMENDED CLAIMS
SERIAL NO. 09/334,969
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1. (Amended) A synthetic multivalent T-cell receptor (TCR) complex for binding to a MHC-peptide complex, which TCR comprises a plurality of T-cell receptors specific for the MHC-peptide complex, wherein each TCR in the complex is a refolded recombinant TCR which comprises:

i) a recombinant TCR α or γ chain extracellular domain having a first C-terminal dimerization peptide which is heterologous to the α or γ chain; and

ii) a recombinant TCR β or δ chain extracellular domain having a second C-terminal dimerization peptide which is specifically heterodimerized with the first dimerization peptide to form a heterodimerization domain,

wherein a disulfide bond present in native TCRs between the α and β or γ and δ chains adjacent to the cytoplasmic domain is absent from the recombinant TCR.

7. (Amended) The TCR complex according to claim 1, wherein the linker molecule is a multivalent attachment molecule ~~such as avidin, streptavidin, or extravidin~~.

8. (Amended) The TCR complex according to claim 7, wherein at least one of the TCR chains α or β is derived from a fusion protein comprising an amino acid sequence encoding a protein tag ~~recognition sequence for a modifying enzyme such as biotin~~.

10. (Amended) The TCR complex according to claim 1, comprising a multimerized ~~multimerised~~ recombinant T-cell receptor heterodimer having enhanced binding capability compared to a non-multimeric T-cell receptor heterodimer.

11. (Amended) A multivalent TCR complex comprising a multimerized ~~multimerised~~ recombinant TCR heterodimer having enhanced binding capability compared to a non-multimeric TCR heterodimer, wherein each TCR in the complex is a refolded recombinant TCR which comprises:

i) a recombinant TCR α or γ chain extracellular domain having a first C-terminal dimerization peptide which is heterologous to the α or γ chain; and

ii) a recombinant TCR β or δ chain extracellular domain having a second C-terminal dimerization peptide which is specifically heterodimerized with the first dimerization peptide to form a heterodimerization domain,

wherein a disulfide bond present in native TCRs between the α and β or γ and δ chains adjacent to the cytoplasmic domain, is absent from the recombinant TCR.

12. CANCELLED

13. CANCELLED

14. (Amended) The TCR complex according to claim 11 [or claim 13], wherein the heterodimerization ~~heterodimerisation~~ domain is a coiled coil domain.

15. (Amended) The TCR complex according to claim 14, wherein the dimerization ~~dimerisation~~ peptides are c-jun and c-fos dimerization ~~dimerisation~~ peptides.

16. (Amended) The TCR complex according to claim [12] 11, comprising a flexible linker located between the T cell receptor chains and the heterodimerization peptides.

22. (Amended) The TCR complex according to claim 20 or claim 21, wherein the T-cell receptors are attached to the vesicle via derivatized ~~derivatised~~ lipid components of the vesicle.

23. (Amended) The TCR complex according to claim 19 or claim 20, wherein the T cell receptors are embedded in the lipid bilayer.

24. (Amended) The TCR complex according to claim 1, wherein the TCRs are attached to a solid structure ~~particle~~.

28. CANCELLED

29. CANCELLED

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33. (New) The TCR complex according to claim 1, wherein the hetereodimerization domain is a coiled coil domain.

34. (New) The TCR complex according to claim 33, wherein the dimerization peptides are c-jun and c-fos dimerization peptides.

35. (New) The TCR complex according to claim 1, comprising a flexible linker located between the T cell receptor chains and the heterodimerization peptides.

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